

Unit 1



Pre-Apollo Activities

Distance to the Moon
Diameter of the Moon
Reaping Rocks

Before Apollo 11 astronauts Neil A. Armstrong and Edwin E. “Buzz” Aldrin Jr. stepped on the Moon on July 20, 1969, people had studied the Moon by eye, telescope, and images from spacecraft. The theme of Unit 1 is a basic introduction to the Moon -- how it looks from Earth, how far away it is, and how big it is. The activities allow students to make comparisons between the Moon and Earth as well as to make predictions about the Moon rocks.

Encourage students to sketch and describe nightly observations of the Moon and keep a written record of date and time. Nightly charting of the Moon helps students recognize Moon phases as well as the bright and dark terrains.

Scale models and proportional relationships are featured in the first two activities. The “Distance to the Moon” and “Diameter of the Moon” activities introduce students to techniques of measuring distances in space indirectly.

This unit also includes an activity to collect and study rocks called “Reaping Rocks.” This activity should follow a more comprehensive lesson on basic rock and mineral identification. The activity also extends learning to the Moon and asks students to predict how their rock collections will compare with lunar samples.

A Resource Section for Unit 1 is on Page 24.

Unit 1

Resource Section

This list presents possible independent and commercial sources of items to complement the activities in Unit 1. The sources are offered without recommendation or endorsement by NASA. Inquiries should be made directly to the appropriate source to determine availability, cost, and ordering information before sending money. Contact your NASA Educator Resource Center (see Page 146) for more lists of resources available directly from the National Aeronautics and Space Administration.

Maps

The Earth's Moon by National Geographic Society. Wall map showing nearside and farside. Also includes graphics with captions explaining eclipses, lunar phases, tides, and other phenomena. U.S. and Soviet landing/impact sites are shown. The reverse side has an index of lunar named features and selected photographs from the Apollo missions.

National Geographic Society
Educational Services, Department 91
Washington, D.C. 20036
1-800-368-2728 or FAX 1-301-921-1575

Giant Moon Map by Rand McNally. Wall map showing the nearside. Contact Rand McNally directly, or order it through:

Astronomical Society of the Pacific
390 Ashton Ave.
San Francisco, CA 94112
1-415-337-2624

Maps of Earth, Moon, Mars, etc.

U.S. Geological Survey Map Sales
Box 25286
Denver Federal Center
Denver, CO 80225
303-236-7477
(Ask for Customer Service)

Globes

Edmund Scientific Co.
101 E. Gloucester Pike
Barrington, NJ 08007-1380
1-609-573-6270 or FAX 1-609-573-6295

Lunar Phase Calendars

Celestial Products

P.O. Box 801
Middleburg, VA 22117
1-800-235-3783 or FAX 1-703-338-4042

Earth Rock Sample Sets

Ward's Natural Science Establishment, Inc.
P.O. Box 92912
Rochester, NY 14692-9012
1-800-962-2660

Slides

Glorious Eclipses slide set

Astronomical Society of the Pacific
390 Ashton Ave.
San Francisco, CA 94112
1-415-337-2624

Other Teacher's Guides

Exploring Meteorite Mysteries: Teacher's Guide with Activities, NASA EG-1997-08-104-HQ.

M. Lindstrom et. al., 1997
Companion volume available from NASA Educator Resource Centers or CORE (refer to Page 146 of this book.)

Return to the Moon: Moon Activities Teacher's Guide, 1990

Challenger Center for Space Science Education
1101 King Street, Suite 190
Alexandria, VA 22314
1-703-683-9740